RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: ___10/801, 509 A___

Source: ___TFW16___

Date Processed by STIC: ___05/04/2006___

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RAW SEQUENCE LISTING   DATE: 05/04/2006
PATENT APPLICATION: US/10/801,509A   TIME: 11:57:53

Input Set : A:\00281CUS.txt
Output Set: N:\CRF4\05042006\J801509A.raw

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 4 <110> APPLICANT: Yan, Riqiang
 5         Tomasselli, Alfredo G.
 6         Gurney, Mark E.
 7         Emmons, Thomas L.
 8         Bienkowski, Mike J.
 9         Heinrikson, Robert L.
11 <120> TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
13 <130> FILE REFERENCE: 29915/00281CUS
15 <140> CURRENT APPLICATION NUMBER: 10/801,509A
16 <141> CURRENT FILING DATE: 2004-03-16
18 <150> PRIOR APPLICATION NUMBER: 09/908,943
19 <151> PRIOR FILING DATE: 2001-07-19
21 <150> PRIOR APPLICATION NUMBER: 60/219,795
22 <151> PRIOR FILING DATE: 2000-07-19
24 <160> NUMBER OF SEQ ID NOS: 199
26 <170> SOFTWARE: PatentIn Ver. 2.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 2070
30 <212> TYPE: DNA
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36 ctgcggctgc ccgggagac cgacgaagag cccgaggagc ccggccggag gggcagcttt 180
37 gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
38 gtgggcagcc ccccgcagac gctcaacatc ctggtggata caggcagcag taactttgca 300
39 gtgggtgctg ccccccaccc cttcctgcat cgctactacc agaggcagct gtccagcaca 360
40 taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
41 ctgggcaccg acctggtaag catcccccat ggccccaacg tcactgtgcg tgccaacatt 480
42 gctgccatca ctgaatcaga caagttcttc atcaacggct ccaactggga aggcatcctg 540
43 gggctggcct atgctgagat tgccaggcct gacgactccc tggagccttt ctttgactct 600
44 ctggtaaagc agacccacgt tcccaacctc ttctccctgc acctttgtgg tgctggcttc 660
45 cccctcaacc agtctgaagt gctggcctct gtcggaggga gcatgatcat ggaggtatc 720
46 gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcggga gtggtattat 780
47 gaggtcatca ttgtgcgggt ggagatcaat ggacaggatc tgaaaatgga ctgcaaggag 840
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52 atccttccgc agcaatacct gcggccagtg gaagatgtgg ccacgtccca agacgactgt 1140
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54 ggcttctacg ttgtctttga tcgggcccga aaacgaattg gctttgctgt cagcgcttgc 1260
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59 aagtgaggag gcccatgggc agaagataga gattcccctg gaccacacct ccgtggttca 1560
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63 ctcggccacc tcaaatttaa gtcgggaaat tctgctgctt gaaacttcag ccctgaacct 1800
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66 agaccaagct tgtttccctg ctggccaaag tcagtaggag aggatgcaca gtttgctatt 1980
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80             20                  25                  30
82 Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
83         35                  40                  45
85 Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
86     50                  55                  60
88 Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
89 65                  70                  75                  80
91 Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
92             85                  90                  95
94 Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
95             100                 105                 110
97 Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
98         115                 120                 125
100 Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
101     130                 135                 140
103 Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
104 145                 150                 155                 160
106 Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
107             165                 170                 175
109 Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
110             180                 185                 190
112 Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
113         195                 200                 205
115 Asn Leu Phe Ser Leu His Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
116     210                 215                 220
118 Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
119 225                 230                 235                 240
121 Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
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124 Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
125                     260                265                270
127 Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
128         275                280                285
130 Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
131     290             . . 295                300
133 Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
134 305             310                315                320
136 Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
137                 325                330                335
139 Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
140                 340                345                350
142 Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
143         355                360                365
145 Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
146     370             375                380
148 Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
149 385             390                395                400
151 Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
152                 405                410                415
154 Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
155             420                425                430
157 Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
158         435                440                445
160 Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala
161     450                455                460
163 Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp
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166 Arg Cys Leu Arg Cys Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp
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181 ctgcggctgc ccgggagac cgacgaagag cccgaggagc ccggccggag gggcagcttt 180
182 gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
183 gtgggcagcc ccccgcagac gctcaacatc ctggtggata caggcagcag taactttgca 300
184 gtgggtgctg ccccccaccc cttcctgcat cgctactacc agaggcagct gtccagcaca 360
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186 ctgggcaccg acctggtaag catcccccat ggccccaacg tcactgtgcg tgccaacatt 480
187 gctgccatca ctgaatcaga caagttcttc atcaacggct ccaactggga aggcatcctg 540
188 gggctggcct atgctgagat tgccaggctt tgtggtgctg cttcccccct caaccagtct 600
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190 acaggcagtc tctggtatac acccatccgg cgggagtggt attatgaggt gatcattgtg 720
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192 agcattgtgg acagtggcac caccaacctt cgtttgccca agaaagtgtt tgaagctgca 840
193 gtcaaatcca tcaaggcagc ctcctccacg gagaagttcc ctgatggttt ctggctagga 900
194 gagcagctgg tgtgctggca agcaggcacc accccttgga acatttttccc agtcatctca 960
195 ctctacctaa tgggtgaggt taccaaccag tccttccgca tcaccatcct tccgcagcaa 1020
196 tacctgcggc cagtggaaga tgtggccacg tcccaagacg actgttacaa gtttgccatc 1080
197 tcacagtcat ccacgggcac tgttatggga gctgttatca cggagggctt ctacgttgtc 1140
198 tttgatcggg cccgaaaacg aattggcttt gctgtcagcg cttgccatgt gcacgatgag 1200
199 ttcaggacgg cagcggtgga aggcccttttt gtcaccttgg acatggaaga ctgtggctac 1260
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209 gcaggttacc ttggcgtgtg tccctgtggt accctggcag agaagagacc aagcttgttt 1860
210 ccctgctggc caaagtcagt aggagaggat gcacagtttg ctatttgctt tagagacagg 1920
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222 Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
223              20                  25                  30
225 Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
226          35                  40                  45
228 Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
229      50                  55                  60
231 Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
232 65                  70                  75                  80
234 Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
235              85                  90                  95
237 Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
238             100                 105                 110
240 Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
241         115                 120                 125
243 Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
244     130                 135                 140
246 Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
247 145                 150                 155                 160
249 Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
250             165                 170                 175
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Output Set: N:\CRF4\05042006\J801509A.raw

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253             180                 185                 190
255 Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly
256         195                 200                 205
258 Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu
259     210                 215                 220
261 Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val
262 225                 230                 235                 240
264 Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr
265                 245                 250                 255
267 Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu
268             260                 265                 270
270 Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser
271         275                 280                 285
273 Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val
274     290                 295                 300
276 Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser
277 305                 310                 315                 320
279 Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile
280             325                 330                 335
283 Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln
284         340                 345                 350
286 Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
287     355                 360                 365
289 Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
290     370                 375                 380
292 Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
293 385                 390                 395                 400
295 Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
296         405                 410                 415
298 Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser Thr Leu Met Thr
299         420                 425                 430
301 Ile Ala Tyr Val Met Ala Ala Ile Cys Ala Leu Phe Met Leu Pro Leu
302         435                 440                 445
304 Cys Leu Met Val Cys Gln Trp Arg Cys Leu Arg Cys Leu Arg Gln Gln
305     450                 455                 460
307 His Asp Asp Phe Ala Asp Asp Ile Ser Leu Leu Lys
308 465                 470                 475
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313 <212> TYPE: PRT
314 <213> ORGANISM: Artificial Sequence
316 <220> FEATURE:
317 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
318       peptide sequence
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322   1               5                 10
325 <210> SEQ ID NO: 6
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/04/2006
PATENT APPLICATION: US/10/801,509A   TIME: 11:57:54

Input Set : A:\00281CUS.txt
Output Set: N:\CRF4\05042006\J801509A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; Xaa Pos. 7
Seq#:15; Xaa Pos. 4,7
Seq#:16; Xaa Pos. 1,4,5,6,7
Seq#:17; Xaa Pos. 1,2,4,5,6,7
Seq#:18; Xaa Pos. 1,2,4,5,6,7
Seq#:21; Xaa Pos. 5
Seq#:27; Xaa Pos. 7,19
Seq#:28; Xaa Pos. 6,7,11,20
Seq#:41; Xaa Pos. 9
Seq#:49; Xaa Pos. 1
Seq#:50; Xaa Pos. 2
Seq#:51; Xaa Pos. 3
Seq#:52; Xaa Pos. 4
Seq#:53; Xaa Pos. 5
Seq#:54; Xaa Pos. 6
Seq#:55; Xaa Pos. 7
Seq#:56; Xaa Pos. 8
Seq#:57; Xaa Pos. 1
Seq#:58; Xaa Pos. 2
Seq#:59; Xaa Pos. 3
Seq#:60; Xaa Pos. 4
Seq#:61; Xaa Pos. 5
Seq#:62; Xaa Pos. 6
Seq#:63; Xaa Pos. 7
Seq#:64; Xaa Pos. 8
Seq#:65; Xaa Pos. 1
Seq#:66; Xaa Pos. 2
Seq#:67; Xaa Pos. 3
Seq#:68; Xaa Pos. 4
Seq#:69; Xaa Pos. 5
Seq#:70; Xaa Pos. 6
Seq#:71; Xaa Pos. 7
Seq#:72; Xaa Pos. 8
Seq#:73; Xaa Pos. 1
Seq#:74; Xaa Pos. 2
Seq#:75; Xaa Pos. 3
Seq#:76; Xaa Pos. 4
Seq#:77; Xaa Pos. 7
Seq#:78; Xaa Pos. 8
Seq#:79; Xaa Pos. 8
Seq#:80; Xaa Pos. 9
Seq#:81; Xaa Pos. 1,7
Seq#:82; Xaa Pos. 2,7
Seq#:83; Xaa Pos. 3,7

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/04/2006
PATENT APPLICATION: US/10/801,509A   TIME: 11:57:54

Input Set : A:\00281CUS.txt
Output Set: N:\CRF4\05042006\J801509A.raw

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Seq#:86; Xaa Pos. 6,7
Seq#:87; Xaa Pos. 7
Seq#:88; Xaa Pos. 7,8
Seq#:89; Xaa Pos. 1
Seq#:90; Xaa Pos. 1,2
Seq#:91; Xaa Pos. 1,3
Seq#:92; Xaa Pos. 1,4
Seq#:93; Xaa Pos. 1,5
Seq#:94; Xaa Pos. 1,6
Seq#:95; Xaa Pos. 1,7
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Seq#:97; Xaa Pos. 1,4,7
Seq#:98; Xaa Pos. 2,4,7
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Seq#:100; Xaa Pos. 4,7
Seq#:101; Xaa Pos. 4,5,7
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Seq#:104; Xaa Pos. 4,7,8
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Seq#:107; Xaa Pos. 1,3,4,5,6,7
Seq#:108; Xaa Pos. 1,4,5,6,7
Seq#:109; Xaa Pos. 1,4,5,6,7
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Seq#:121; Xaa Pos. 9
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VERIFICATION SUMMARY   DATE: 05/04/2006
PATENT APPLICATION: **US/10/801,509A**   TIME: 11:57:54

Input Set : **A:\00281CUS.txt**
Output Set: **N:\CRF4\05042006\J801509A.raw**

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L:476 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:524 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:548 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:695 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:16
L:731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:734 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:16
L:928 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:1045 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:0
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L:1102 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:0
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L:1311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0
L:1330 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64 after pos.:0
L:1349 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65 after pos.:0
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L:1521 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74 after pos.:0
L:1540 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:0
L:1559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:0
L:1578 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:77 after pos.:0
L:1597 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:0
L:1616 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:79 after pos.:0
L:1635 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:0
L:1659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0
L:1683 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:0
L:1707 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:0
L:1731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:0
L:1755 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:0
```

VERIFICATION SUMMARY DATE: 05/04/2006
PATENT APPLICATION: **US/10/801,509A** TIME: 11:57:54

Input Set : **A:\00281CUS.txt**
Output Set: **N:\CRF4\05042006\J801509A.raw**

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L:1779 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:0
L:1798 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87 after pos.:0
L:1822 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88 after pos.:0
L:1841 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:0
L:1865 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:0
L:1889 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91 after pos.:0
L:1913 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:0
L:1937 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93 after pos.:0
L:1961 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:0
L:1985 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:0
L:2009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96 after pos.:0
L:2038 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97 after pos.:0
L:2067 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98 after pos.:0
L:2096 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:0
L:2120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:100 after pos.:0
L:2149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:0
L:2178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102 after pos.:0
L:2202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103 after pos.:0
L:2231 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104 after pos.:0
L:2256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105 after pos.:0
L:2285 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:0
L:2314 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107 after pos.:0
L:2343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108 after pos.:0
L:2377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:0
L:2411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110 after pos.:0
L:2440 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111 after pos.:0
L:2469 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112 after pos.:0
L:2612 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121 after pos.:0
L:3213 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:134 after pos.:0
L:3232 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:135 after pos.:0
L:3251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:136 after pos.:0
L:3514 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:154 after pos.:0
L:3533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155 after pos.:0
L:3557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:156 after pos.:17
L:3579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:157 after pos.:16
L:3598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:158 after pos.:0
L:3620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:159 after pos.:15
L:3643 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:160 after pos.:15
L:3665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:161 after pos.:15
L:3684 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:162 after pos.:0
L:3703 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:163 after pos.:0
L:3728 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:164 after pos.:16
L:3749 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:165 after pos.:16
L:3769 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:166 after pos.:0
L:3791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:167 after pos.:15
L:3814 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:168 after pos.:15
L:3836 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:169 after pos.:15
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